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Express Mail Label No. EL172582334UW Docket No.: END9 2000 0041 US1

NEW UTILITY PATENT APPLICATION TRANSMITTAL

(Large Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b)

Total Pages this Submission:3

TO THE ASSISTANT COMMISSIONER FOR PATENTS
Box Patent Application
Washington, D.C. 20231

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:
SYSTEM AND METHOD FOR MEASURING AND MANAGING PERFORMANCE IN AN INFORMATION TECHNOLOGY ORGANIZATION

and invented by:
SUZANNE M. JORDAN, PATRICK W. McMAHON, DAVID B. McNEILL, NORA M. PANLILIO-YAP

If a CONTINUATION APPLICATION, *check the appropriate box and supply the requisite information:*

☐ Continuation ☐ Divisional ☐ Continuation-in-part(CIP) of prior application No.: _____

Enclosed are:

Application Elements

01. ☒ Filing fee as calculated and transmitted as described below

02. ☒ Specification having 56 pages and including the following:

a. ☒ Descriptive Title of the Invention

b. ☐ Cross References to Related Applications *(if applicable)*

c. ☐ Statement Regarding Federally-sponsored Research/Development *(if applicable)*

d. ☐ Reference to Microfiche Appendix *(if applicable)*

e. ☒ Background of the Invention

f. ☒ Brief Summary of the Invention

g. ☒ Brief Description of the Drawings *(if drawings filed)*

h. ☒ Detailed Description

i. ☒ Claim(s) as Classified Below

j. ☒ Abstract of the Disclosure

03. ☒ Drawing(s) when necessary as prescribed by 35 USC 113)

a. ☐ Formal

b. ☒ Informal

Number of sheets: 8

Docket No.: END9 2000 0041 US1

NEW UTILITY PATENT APPLICATION TRANSMITTAL

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Total Pages this Submission:3

Application Elements (Continued)

04. ☒ Oath or Declaration

a. ☐ Newly executed (original or copy) ☒ Not executed

b. ☐ Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional application only)*

c. ☒ With Power of Attorney ☐ Without Power of Attorney

05. ☐ Incorporation By Reference *(usable if box 4b is checked)*

The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Item 4b, is considered as being part of the disclosure of accompanying application and is hereby incorporated by reference therein.

06. ☐ Computer Program in Microfiche *(Appendix)*

07. ☐ Nucleotide and/or Amino Acid Sequence Submission *(if applicable, all must be included)*

a. ☐ Paper Copy

b. ☐ Computer Readable Copy *(identical to computer copy)*

c. ☐ Statement Verifying Identical Paper and Computer Readable Copy

Accompanying Application Parts

08. ☐ Assignment Papers *(cover sheet & document(s))*

09. ☐ 37 CFR 3.73(B) Statement *(when there is an assignee)*

10. ☐ English Translation Document *(if applicable)*

11. ☒ Information Disclosure Statement/PTO-1449 ☒ Copies of IDS citation

12. ☐ Preliminary Amendment

13. ☒ Acknowledgment postcard

14. ☒ Certificate of Mailing

☐ First Class ☒ Express Mail (Label No:EL172582334US)

15. ☐ Certified Copy of Priority Document(s) *(if foreign priority is claimed)*

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NEW UTILITY PATENT APPLICATION TRANSMITTAL

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(Only for new nonprovisional applications under 37 CFR 1.53(b)

Total Pages this Submission:3

Accompanying Application Parts (Continued)

16. ☐ Additional Enclosures *(identify below)*

Fee Calculation and Transmittal

CLAIMS AS FILED

For	# Filed	# Allowed	# Extra	Rate	Fee
Total Claims	**28**	-20	8	x $18.00	$ 144.00
Indep. Claims	18	- 3	15	x $78.00	$1,170.00
Multiple Dependent Claims ____					$
				BASIC FEE	$ 690.00
Other FEE *(Specify purpose)*					$
				TOTAL FILING FEE	$2,004.00

☐ A check in the amount of $ to cover the filing fee is enclosed.

☒ The Commissioner is hereby authorized to charge and credit IBM Corporation Deposit Account No. 09-0457 as described below. A duplicate copy of this sheet is enclosed.

- ☒ Charge the amount of $2,004 as filing fee.
- ☒ Credit any overpayment.
- ☒ Charge any additional filing fees as required under 37 C.F.R. 1.16 and 1.17.
- ☐ Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

Dated: 2Aug2000

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Docket No.END9 2000 0041 US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	S. M. JORDAN, ET AL		
Serial No.:	N/A	Group No.:	N/A
Filed:	HEREWITH	Examiner:	N/A

For: SYSTEM AND METHOD FOR MEASURING AND MANAGING PERFORMANCE IN AN INFORMATION TECHNOLOGY ORGANIZATION

Assistant Commissioner For Patents
Washington, D.C. 20231

EXPRESS MAIL CERTIFICATE

"Express Mail" label number: EL172582334US

Date of Deposit: 3 AUG 2000

I hereby certify that the following attached paper or fee

New Utility Patent Application Transmittal
Specification: 56 pages (including claims)
Declaration and Power of Attorney (not signed)
Drawings (8 sheets)
Express Mail Certificate
Information Disclosure Statement
PTO Form 1449 (revised)
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is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the US PATENT & TRADEMARK OFFICE, COMMISSIONER OF PATENTS, WASHINGTON DC 20231-9998.

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APPLICATION

FOR

UNITED STATES LETTERS PATENT

APPLICANT NAME S. M. JORDAN, ET AL.

TITLE SYSTEM AND METHOD FOR MEASURING AND MANAGING PERFORMANCE IN AN INFORMATION TECHNOLOGY ORGANIZATION

DOCKET NO. END9 2000 0041 US1

INTERNATIONAL BUSINESS MACHINES CORPORATION

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Signature — Date

END9-2000-0041-US1

SYSTEM AND METHOD FOR MEASURING AND MANAGING PERFORMANCE IN AN INFORMATION TECHNOLOGY ORGNIZATION

Background of the Invention

Technical Field of the Invention

This invention pertains performance management. More particularly, it relates to measuring and managing the performance of an information technology (IT) organization.

Background Art

Developing a system that measures the performance of an IT organization is critical to managing the IT organization and continually improving the processes that it employs over time. However, no regular, canonical method for developing a system that measures the performance of an IT organization is evident in the industry. The lack of such a method creates great difficulty in understanding the performance of the IT organization, and this is a critical aspect to successful management and improvement of the IT organization over time. This problem has existed since the formation of IT organizations. Consequently, there is a need in the art

for a repeatable work product-based method for defining and implementing a measurement program for an IT organization.

There is a need in the art for a system and method for providing measurement gap analysis describing the relationship between the measurement system and the underlying organization and processes. Without appropriate organizational and process support, it is difficult for any measurement system to achieve maximum potential usefulness. Measurement systems that are supported by the appropriate organizational structure and are fully integrated with the organizations process have a much higher probability of being effective.

It is an object of the invention to provide a system and method for systematically defining and implementing a measurement program.

It is a further object of the invention to provide a system and method for implementing a measurement program that is supported by an appropriate organizational structure and that is fully integrated with the organization's processes.

It is a further object of the invention to provide a

system and method for identifying and defining measurements necessary to support the management of an IT organization.

It is a further object of the invention to provide a system and method for linking defined measurements to organization goals and objectives.

It is a further object of the invention to provide a system and method of integrating measurement ownership into an organizational model.

It is a further object of the invention to provide a system and method for integrating measurement data collection into an IT process model.

It is a further object of the invention to provide a system and method for developing a technical environment for supporting measurement data collection, analysis and reporting.

It is a further object of the invention to provide a system and method for developing the technical interfaces necessary to support measurement data collection.

It is a further object of the invention to provide a

system and method for developing measurement reporting methods.

It is a further object of the invention to provide a system and method for developing training and end-user support materials for a measurement system.

Summary of the Invention

A system and method for defining and implementing measurements to support a customer information technology organization. Steps involve identifying customer performance goals; building a model in response to customer goals including a plurality of primitive metrics; performing a gap analysis of the model to determine which of the primitive metrics are already collected by the organization and the process capabilities to support the data collection; identifying new data collection sources for the primitive metrics which are not already collected by the organization; and implementing the tools and processes for gathering all of the primitive metrics and tools for generating measurement reports from the gathered primitive metrics.

In accordance with a preferred embodiment of the invention, measures of performance of a customer information technology organization are determined by defining the organization goals, identifying the behaviors that the organization exhibits when working toward or meeting the defined goals, identifying and defining the measurements that provide empirical evidence on the achievement and attainment of the desired behaviors, balancing the defined measurement categories, and prioritizing the measurements for implementation based on the balance.

Other features and advantages of this invention will become apparent from the following detailed description of the presently preferred embodiment of the invention, taken in conjunction with the accompanying drawings.

Brief Description of the Drawings

Figure 1 is high level flow diagram illustrating the context of the method of a preferred embodiment of the invention.

Figure 2 is a high-level overview of the measurement

and performance management (MAPM) method of a preferred embodiment of the invention.

Figure 3 is a diagram detailing the high-level overview of the MAPM method of Figure 2 from a work product-based view.

Figure 4 is a diagram illustrating the measurement gap analysis embodiment of the invention.

Figure 5 is a diagram illustrating a measurement model for an IT organization including the notion of behaviors in accordance with a preferred embodiment of the invention.

Best Mode for Carrying Out the Invention

Referring to Figure 1, the process of the preferred embodiment of the invention for creating a measurement model work product 102 is part of the requirements phase of the measurement and performance management(MAPM) methodology. This process relies on input from a target future business

capabilities work product 101 and provides critical input into the measurement gap analysis work product 103. Measurement model 102 represents the core of requirements for the MAPM method and is used as the basis for developing process and organizational linkages, and many other technical work products to support its implementation with an information technology (IT) organization. A more detailed description of the process for creating measurement model work product 102 will be provided hereafter, particularly in connection with Figure 6.

Referring to Figure 2, a high level view of the method of a preferred embodiment of the invention includes in step 200 collecting into a competency-defined measurement categories and measurements file definitions of human resources 210, quality 211, customer 212, cost and schedule 213, process 214, and productivity and output 215 measurement parameters. In step 202, a measurement adoption method is executed, thereby selecting and defining contract measurements. In step 204, a measurement architecture and implementation method is executed to implement the contract measurements. In step 206, a measurement operations services method is executed to implement ongoing use and maintenance of measurements. As is represented by step 208, measurement program work products are produced and used

throughout steps 200-206.

Referring to Figure 3, the system and method of the preferred embodiments of the invention are built upon the IBM Work Product-based Methodology Development Approach as defined and implemented by Solution Consulting Integration (SCI) practice through its SCI Enablement Process and new work products which extend the SCI method. These new work products include three work products representing the formulation of the measurement requirements that are to be implemented in an engagement, and are illustrated in Figure 3 as measurement model 102, current customer measurements 242, and measurement gap analysis 103. These new work products also include four work products representing additional implementation and/or technical requirements to support the implementation of measurement model 102, and include interface agreement 268, configuration script 272, contract measurement business policy 276, and scorecard 270.

Practitioner accesses to the documents that are the work products of the preferred embodiment of the method of the invention may be, for example, by way of HTML code that provides users of the method access to work product (WP) dependency diagrams, engagement models, work product description papers and work product technique papers.

Similarly, such documents may be maintained in collaboration space, and available based on access controls, to members of development, marketing and implementation teams throughout an enterprise. The IBM QuickPlace (TM) provides such a collaboration space. The Lotus Domino/Notes (TM) may also be used to control access using access control lists and provide consistency among several instances of data using replication.

An MAPM engagement includes three contextual phases 220, 222, and 224. Proposal phase 220, in the context of developing a measurement solution, represents the development of the initial solution specifications, including costs, that are to be delivered to a customer. Due diligence phase 222 represents the validation of assumptions and expectations that are made in developing a proposal to the customer before an outsourcing agreement is signed. Transition/transformation phase 224 represents the first major group of activities that occur once a legal contract for outsourcing has been established. This is where the transfer of resources and assets occurs and the implementation of specific new processes and procedures is introduced into this new organization.

Proposal phase 220 includes the following work

products: current customer measurements 242, target future business capabilities 101, future process design points 248, to-be organization design 250, measurement model 102, recommendation and preliminary business case 240, and current IT infrastructure 230. Other work products providing input to proposal phase 220 include measurement catalog 234 and business policy 236.

Due diligence phase 222 includes the following work products: measurement gap analysis 103, to-be process design 252, measurement model 102, interface agreement 268, model of network workstation technical architecture 260, current application portfolio 264, and model of technical server architecture 262.

Transition/transformation phase 222 includes the following work products: interface agreement 268, deployment plan 274,external interface requirements 266, configuration script 272, end-user training materials 278, contract measurement business policy 276, and scorecard 270.

As is represented by line 401, current IT infrastructure work product 230 provides input to model of network workstation technical architecture work product 260.

As is represented by line 402, measurement model work product 102 provides input to architecture work product 260.

As is represented by line 403, technical architecture work product 260 provides input to model of technical server architecture 262.

As are represented by lines 404, 405, and 406, inputs to measurement gap analysis work product 103 come from to-be organization design work product 250, future process design points work product 248, and current customer requirements work product 242, respectively, with feedback to to-be organization design work product 250 from measurement gap analysis work product 103.

As is represented by line 407, measurement model work product 102 provides input to recommendation and preliminary business case work product 240.

As is represented by line 408, measurement gap analysis 103 and measurement mode 102 feed each other.

As is represented by line 409, target future business capabilities work product 101 provides input to measurement model 102, as further described above in connection with

Figure 2.

As is represented by lines 410, 411, 412 and 415, measurement model work product 102 provides inputs to model of technical server architecture work product 262, current application portfolio work product 264, configuration script work product 272 and interface agreement work product 268, respectively.

As is represented by lines 413 and 414, measurement model work product 102 receives inputs from measurement catalog work product 234 and business policy work product 236, respectively.

As is represented by lines 417 and 423, current application portfolio work product 264 provides inputs to interface agreement work product 268 and contract measurement business policy work product 276.

As is represented by lines 418 and 424, interface agreement work product 268 provides inputs to configuration script work product 272 and scorecard 270, respectively.

As is represented by line 419, external interface requirements work product 266 provides input to interface

agreement 268.

As is represented by lines 420 and 427, configuration script 272 provides inputs to scorecard 270 and contract measurement business policy work product 276, respectively.

As is represented by line 421, model of technical server architecture work product 262 provides input to deployment plan work product 274.

As is represented by line 422, end-user training materials work product 278 provides input to deployment plan work product 274.

As is represented by line 425, contract measurement business policy work product 276 provides input to end-user training materials work product 278.

As is represented by lines 426 and 428, model of network workstation technical architecture work product 260 provides inputs to contract measurement business policy work product 276 and deployment plan work product 274, respectively.

As is represented by line 429, scorecard work product

270 provides input to end-user training materials 278.

As is represented by line 430, measurement gap analysis work product 103 and to-be process design work product 252 exchange inputs and outputs.

Current IT infrastructure 230 describes the physical systems and network configurations of the customer.

Target future business capabilities 101 defines the customer's goals and objectives, necessary to achieve through measurements.

Measurement catalog 234 is the intellectual capital that contains the results of all previous engagements, and is used to support new engagements in the selection of measurements.

Business policy 236 represents optional intellectual capital describing business policies.

Measurement model 102 defines the key requirements for the engagement, represents the translation of target future business capabilities 101 into account specific behaviors, and includes measures that empirically demonstrate those

behaviors. The process implemented by measurement model 102 will be further described hereafter in connection with Figures 5 and 6.

Recommendation and preliminary business case 240 defines high level cost benefit estimates on the technical solutions that might be considered for measurement model implementation.

Current customer measurements 242 provides a detailed list of the measurements that are being collected and reported currently by the customer.

Future process design points 248 provides high level requirements for developing the to-be process design 252.

To-be organization design 250 is the planned organization model.

To-be process design is 252 is the planned processes model.

Model of network/workstation technical architecture 260 is a systems view of the hardware and software that supports the end users of the measurement system.

Model of technical server architecture 262 is a systems view of the hardware and software server that supports the measurement system implementation and the system's end users.

Current application portfolio 264 is a detailed list of the applications that are being supported by the vendor/service organization.

External interface requirements 266 is a detailed list of the outside systems that the measurement system must interface in order to perform data collection or data extraction.

Interface agreement 268 is a formal agreement between systems to ensure that expectations for data collection are appropriately documented.

Scorecard 270 is the visualization (reporting) requirements of the measurement system.

Configuration script 272 is the code necessary to configure the tools used to implement the measurement model.

Deployment plan 274 is the project plan for

implementing the system in the organization.

Contract measurement business policy 276 provides the basic expectations of behavior on the account that must be conformed to in order to support data collection, reporting and analysis for the measurement system.

End user training materials 278 are educational materials used to teach the organization about the measurement system and its supporting tools.

Developing a system that measures the performance of an IT organization is critical to managing the IT organization and continually improving the processes that it employs over time. In accordance with a preferred embodiment of the invention, an IT measurement system is aligned with the IT organization's business goals by examining the IT organization's current state-of-affairs with respect to measurement and analyzing how it maps to a proposed measurement model. To ensure the viability of the proposed measurement model, it is important the IT organization be structure to support the model and that the processes employed within the organization lend themselves to naturally support the collection, analysis, reporting, and use of the measurements in the proposed model. In

accordance with a preferred embodiment of the invention, a method is provided for systematically analyzing how the IT organization's current measurement system, if one exists, maps to the proposed measurement model and for identifying impacts to the to-be organization design and the to-be process design.

Measurement gap analysis 103 defines the difference between the measurement model 102 and current customer measurements 242, additionally, with reference to to-be organization design 250 and to-be process design 252, considering possible deficiencies in the organization model and organization processes.

Heretofore organizations in industry, while recognizing the need for establishing or improving measurement systems, have done so through a project-level perspective. In accordance with the system and method of the preferred embodiment of the invention, measurement gaps are addressed at the contract or program level. The gaps which are identified include gaps in the measures to be collected, analyzed, reported, and used, together with the critical relationship of measurements to the underlying organization structure and the processes that the organization employs.

Referring to Figure 4, a flow diagram of the measurement gap method of a preferred embodiment of the invention illustrates the inputs and outputs and the steps executed in developing measurement gap analysis work product 103.

In step 302, current customer measurements 242 are reviewed.

In step 304, current customer measurements 242 are mapped to measurement model 102.

In step 306, measurement gaps are identified.

In step 308, measurements not covered by the measurement model are identified.

In step 310, non-productive measurements are identified.

In step 312, the impact to the existing organizational structure is identified.

In step 314, the impact to processes is identified.

In step 316, other requirements for measurement program success are identified.

The canonical method of the preferred embodiment of the invention for developing a system that measures the performance of an IT organization involves identifying measures for an IT organization that are directly tied to goals and behaviors that the IT organization should be exuding, as defined by the IT management team. "Canonical" means fully thought through and consistent. The measurement model work product 102 and associated techniques work from a top-down approach, starting with the goals of the organization, identifying appropriate behaviors and finally associating measures that will empirically demonstrate achievement of the behaviors. In addition, algorithms for prioritization are executed to ensure that the best fitting measures are selected in the final measurement model.

Referring to Figure 5, this canonical process for defining measurements model work product 102 includes in step 232 articulating the envisioned to-be business goals through a series of goals and questions or behaviors. In step 236, in an optional, more specific embodiment, standard business policy driving behaviors that are assumed or expected are defined. In step 234, a measurements catalog

of industry measurements are enumerated and fully defined in a database of existing contract measurements, including behaviors and goals that they satisfy.

In step 326, an intellectual mapping is done between the envisioned to-be business goals and potential measures. A prioritization and balancing process is applied to ensure that the best measures are selected. This step 326 involves a two step prioritization and balancing process including, in step 328, prioritization of measures by number of objectives and behaviors satisfied, and in step 330 identification of measures that have the highest number of occurring related measures in the same or another category.

The method of the preferred embodiment of the invention draws upon several concepts from goals-question-metric (GQM) techniques described in Basili, Victor et al., "The Goal Question Metric Approach," Institute for Advanced Computer Studies, Department of Computer Science, University of Maryland, College Park, Maryland. To this are added notions of behaviors as a bridge between organizational goals and the identification and definition of measures that enable the required behaviors attempting to occur. The inclusion of behaviors in the overall technique implemented by the preferred embodiment of the invention creates a more tightly

integrated measurement model especially when dealing with measurement definition at the IT organization level, where business drivers and other organizational objectives form the basis of measurement requirements. Behaviors are the performance expectations of the individuals affected by the measurement model. These could be new ways of acting or new areas of focus in the respective roles on the account.

Referring to Figure 6, a more detailed description of this canonical process includes, in step 340, defining the IT organization goals; in step 341, defining associated behaviors; in step 342, mapping behaviors against the measurement catalog; in step 343, building a first draft measurement model; in step 344 prioritizing measures by number of behaviors satisfied; in step 345, prioritizing measures on number of related measures; in step 346 building a second draft measurement model; and in step 347 performing gap analysis. Each of these steps will be further described.

In step 340, IT organization goals are identified during the creation of target future business capabilities work product 101. Typically, the goals of the organization are broken out into one or more categories of measures. In accordance with the preferred embodiment of the invention,

these six categories include those previously discussed in connection with Figure 2, and are human resources 210, quality 211, customer 212, cost and schedule 213, process 214, and productivity and output 215.

In step 341, behaviors that best demonstrate achievement of a particular organizational goal are defined. For each of the organization goals defined in target future business capabilities work product 101, one or more behaviors are defined. Similar in concept to the question aspects of the GQM approach, behaviors are defined to represent those characteristics the IT organization should foster as part of its normal operations. Behaviors identify an end state that should be directly tied to the organizations goals.

As an example, if the organization's goal is in the area of ensuring that appropriate processes exist in the IT department, several behaviors might be identified, such as (1) the ability of the organization to forecast process needs, that is processes that should exist today but do not); (2) the knowledge of the IT staff of existing processes; (3) the ability to manage to process gaps; and (4) the consistent use and adherence to documented processes.

Behaviors are typically simple sentence structures and may even be incomplete sentences. They are short statements that represent ideas, actions or activities that demonstrate commitment and refinement of the organization goals. Typically, the organization goals are expressed as high level statements or highly summarized notions. Behaviors are intended to be a level or two below the organization goals and bring about a level of granularity low enough to support identification of measures that might empirically demonstrate achievement of the desired behaviors.

A sample table for capturing the results of this step 341 is included in Table 1: Goals, Behaviors, and Measurements:

TABLE 1: GOALS, BEHAVIORS, AND MEASUREMENTS

Goal 1	Behavior 1	Measurement 1
Goal 2	Behavior 2	Measurement 2

where measurements are those identified in step 342, infra.

In step 342, those measurements from the measurement catalog 234 that best satisfy the identified behaviors are identified. This catalog is a database accessed using associated behaviors as a search parameter.

In step 343, the first draft 326 of measurement model 102 is built. This involves documenting the results of step 342 in the measurements column of Table 1 and in measurements model 326. In addition, other attributes of the measures are captured in measurement model 326, with their base values coming from measurement catalog 234. Table 2 illustrates the fields in measurements model 326 for capturing measurements and other attributes.

TABLE 2: MEASUREMENTS MODEL FORMAT

FIELD NAME	DESCRIPTION
MEASUREMENT NAME	NAME OF THE MEASURE
MEASUREMENT DEFINITION	ITS DEFINITION
ELEMENTAL METRICS	WHAT IS THE ELEMENTAL DATA REQUIRED TO CALCULATE THE MEASURE?
MEASUREMENT CALCULATION	HOW IS THE MEASURE CALCULATED?
RELATED MEASUREMENTS	WHAT RELATED MEASURES EXIST FOR THIS MEASUREMENT?
FREQUENCY OF DATA CAPTURE	HOW OFTEN IS DATA FOR THIS MEASURE COLLECTED?
FREQUENCY OF MEASUREMENT REPORTING	HOW OFTEN ARE THE RESULTS OF THIS MEASURE REPORTED?
REPORTING PROCESS	WHAT I.T. PROCESS TYPICALLY REPORTS THIS DATA?
EVENT TRIGGER	WHAT EVENT OR STEP IN THE PROCESS TRIGGERS THE AVAILABILITY OF THIS DATA
ORGANIZATIONAL OWNER	NAME OF ORGANIZATIONAL OWNER

In step 344, a first prioritization exercise 328 is performed on the measures in the first draft 326 of measurement model 102. For each of the measures identified in step 342, a table is built that describes the relationship with each of the behaviors it may satisfy. In

many cases, a single measure may actually satisfy more than one behavior. This is important in the identification and selection of measures, since it is most desirable to keep the final number of measurers to a minimum. This prioritization process is done for each of the categories of the measurement model 102. Table 3, First Prioritization Example: People Measurements, illustrates how to capture the prioritization in this step 344.

Docket No. END920000041US1

TABLE 3: FIRST PRIORITIZATION EXAMPLE: PEOPLE MEASUREMENTS PART A

		BEHAVIORS/MEASUREMENTS			
	PEOPLE BEHAVIORS	JOB SATIS-FACTION	TURNOVER RATE	REASONS FOR EXIT	CERTI-FICATION PROGRAM EFFECTIVE-NESS
	FORECAST SKILLS NEED ON A ROLLING X MONTH BASIS		X		
	KNOW/MONITOR THE CURRENT SKILLS		X		
	MANAGE TO THE SKILLS GAP				
	ACTIVELY MANAGE ENVIRONMENTAL ISSUES	X		X	
	PLAN AND MANAGE TO SHORT-TERM AND LONG-TERM USAGE OF CONTRACTORS				
	MANAGE TO THE REDUCTION OF LONG-TERM CONTRACTOR DEPENDENCIES				
	RECRUIT ENTRY LEVEL STAFF TO MEET A PORTION OF FUTURE SKILLS NEED				
	HIRE EXPERIENCED PEOPLE TO FILL IMMEDIATE SKILL NEEDS, WHICH ARE LONG-TERM IN NATURE				
	PROACTIVELY MANAGE RECRUITMENT UNTIL NEW HIRES ARE ON-BOARD				
	PROACTIVELY FOSTER LONG-TERM RELATIONSHIPS WITH LOCAL RECRUITMENT SOURCES				
	CREATE AN ENVIRONMENT ATTRACTIVE TO TARGETED RECRUITS	X		X	
	MEASUREMENT SUBTOTAL	**2**	**2**	**2**	**0**

TABLE 3: FIRST PRIORITIZATION EXAMPLE: PEOPLE MEASUREMENTS PART B

		BEHAVIORS/MEASUREMENTS			
5	PEOPLE BEHAVIORS	CONTRACTOR ENGAGEMENT DURATION	CONTRACTOR USAGE	UNFILLED POSITIONS	JOB OFFER ACCEPTANCE RATE
	FORECAST SKILLS NEED ON A ROLLING X MONTH BASIS				
10	KNOW/MONITOR THE CURRENT SKILLS	X	X	X	
	MANAGE TO THE SKILLS GAP		X	X	
	ACTIVELY MANAGE ENVIRONMENTAL ISSUES				
15	PLAN AND MANAGE TO SHORT-TERM AND LONG-TERM USAGE OF CONTRACTORS	X	X		
	MANAGE TO THE REDUCTION OF LONG-TERM CONTRACTOR DEPENDENCIES	X	X		
20	RECRUIT ENTRY LEVEL STAFF TO MEET A PORTION OF FUTURE SKILLS NEED			X	
	HIRE EXPERIENCED PEOPLE TO FILL IMMEDIATE SKILL NEEDS, WHICH ARE LONG-TERM IN NATURE	X		X	
25	PROACTIVELY MANAGE RECRUITMENT UNTIL NEW HIRES ARE ON-BOARD				X
	PROACTIVELY FOSTER LONG-TERM RELATIONSHIPS WITH LOCAL RECRUITMENT SOURCES				
30	CREATE AN ENVIRONMENT ATTRACTIVE TO TARGETED RECRUITS				
	MEASUREMENT SUBTOTAL	**4**	**4**	**4**	**1**
35					
40					

The measurement subtotal scores in Table 3 are derived from simple counts of the numbers of X's in each of the columns. Those measures with the highest scores satisfy the most number of behaviors and are more desirable as measurers in the model since they provide more knowledge and insight for the cost of implementation. Of course, the table could be modified to reflect weighting factors on both cost and effectiveness, but such is not deemed essential for this embodiment of the invention.

In step 345, the second prioritization process 330 is performed on the measurements in the first draft 326 of measurement model 102. For each of the measures identified in step 342, a table is built that describes the related measure. In many cases a single measure may actually be related to more than one measure. This is important in the identification and selection of measures, since it is most desirable to keep the final number of measures to a minimum. This prioritization process 330 is done for each of the categories of the measurement model. Table 4, Second Prioritization Example: People Measurements, illustrates how to capture the prioritization in this step 345.

TABLE 4: SECOND PRIORITIZATION EXAMPLE: PEOPLE MEASUREMENTS PART A

	PEOPLE MEASUREMENTS	PEOPLE MEASUREMENTS			
	PEOPLE MEASUREMENTS	JOB SATIS-FACTION	TURNOVER RATE	REASONS FOR EXIT	CERTI-FICATION PROGRAM EFFECTIVE-NESS
	JOB SATISFACTION	0	X	X	X
	TURNOVER RATE		0	X	X
	REASONS FOR EXIT	X		0	
	CERTIFICATION PROGRAM EFFECTIVENESS	X	X		0
	CONTRACTOR ENGAGEMENT DURATION	X			
	CONTRACTOR USAGE	X			
	UNFILLED POSITIONS	X			
	JOB OFFER ACCEPTANCE RATE				X
	MEASUREMENT SUBTOTAL	**5**	**2**	**2**	**3**

TABLE 4: SECOND PRIORITIZATION EXAMPLE: PEOPLE MEASUREMENTS PART B

	PEOPLE MEASUREMENTS	PEOPLE MEASUREMENTS			
	PEOPLE MEASUREMENTS	CONTRACTOR ENGAGEMENT DURATION	CONTRACTOR USAGE	UNFILLED POSITIONS	JOB OFFER ACCEPTANCE RATE
	JOB SATISFACTION		X		
	TURNOVER RATE	X	X		
	REASONS FOR EXIT				
	CERTIFICATION PROGRAM EFFECTIVENESS				
	CONTRACTOR ENGAGEMENT DURATION	0		X	
	CONTRACTOR USAGE		0	X	X
	UNFILLED POSITIONS			0	X
	JOB OFFER ACCEPTANCE RATE	X	X		0
	MEASUREMENT SUBTOTAL	**2**	**3**	**2**	**2**

The measurement subtotal is derived from the sum of X's in each of the columns. Those measures that have the highest scores also have the highest number of related measures, making them desirable as measurement for the base model. When prioritized against the results of the behaviors to measurement matrix (Table 3), an initial set of measurements can be identified. The cells with a "0" entry indicate the same measure to same measure condition, which

should not be considered in the matrix, because it is not meaningful to relate a measure to itself.

In step 346, the results of the prioritization processes 328 and 330 are used to build the second draft 332 of measurement model 102. The tables built in steps 344 and 345 are used to select those measures that should be included in the final measurement model. A simple approach is to calculate the mean values of measurement subtotals from each of Tables 3 and 4 and select those measures that have scores greater than or equal to that mean.

As an example, in step 344, the mean score is

$$[(2+2+2+0+4+4+4+1)/8] = 2.375$$

As a result, the following measures would be selected: contractor engagement duration, contractor usage, and unfilled positions. Some measures may need to be included in measurement model 102 in exception of this prioritization process either because of specific customer need or because it may be the only measure that satisfies a particular behavior and/or goal.

The selected measures are then captured in the format

described in step 343, Table 2.

In step 347, once the final set of measures has been documented, a gap analysis 103, as previously described in connection with Figure 4, needs to be done to ensure that linkages are in place between the measurements, processes and organization. In addition, any time a change that results in the addition or deletion of a measurement in the model occurs, the gap analysis step is performed.

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Advantages over the Prior Art

It is an advantage of the invention that there is provided a system and method for systematically defining and implementing a measurement program.

It is a further advantage of the invention that there is provided a system and method for implementing a measurement program that is supported by an appropriate organizational structure and that is fully integrated with the organization's processes.

It is a further advantage of the invention that there

is provided a system and method for identifying and defining measurements necessary to support the management of an IT organization.

It is a further advantage of the invention that there is provided a system and method for linking defined measurements to organization goals and objectives.

It is a further advantage of the invention that there is provided a system and method of integrating measurement ownership into an organizational model.

It is a further advantage of the invention that there is provided a system and method for integrating measurement data collection into an IT process model.

It is a further advantage of the invention that there is provided a system and method for developing a technical environment for supporting measurement data collection, analysis and reporting.

It is a further advantage of the invention that there is provided a system and method for developing the technical interfaces necessary to support measurement data collection.

It is a further advantage of the invention that there is provided a system and method for developing measurement reporting methods.

It is a further advantage of the invention that there is provided a system and method for developing training and end-user support materials for a measurement system.

Alternative Embodiments

It will be appreciated that, although specific embodiments of the invention have been described herein for purposes of illustration, various modifications may be made without departing from the spirit and scope of the invention. In particular, it is within the scope of the invention to provide a computer program product or program element, or a program storage or memory device such as a solid or fluid transmission medium, magnetic or optical wire, tape or disc, or the like, for storing signals readable by a machine, for controlling the operation of a computer according to the method of the invention and/or to structure its components in accordance with the system of the invention.

Further, each step of the method may be executed on any general computer, such as an IBM System 390, AS/400, PC or the like and pursuant to one or more, or a part of one or more, program elements, modules or objects generated from any programming language, such as C++, Java, Pl/1, Fortran or the like. And still further, each said step, or a file or object or the like implementing each said step, may be executed by special purpose hardware or a circuit module designed for that purpose.

Accordingly, the scope of protection of this invention is limited only by the following claims and their equivalents.

CLAIMS

We claim:

1. A method for defining the measures of performance of a customer information technology organization, comprising the steps of:

identifying customer performance goals;

building a model in response to the customer goals including a plurality of primitive metrics;

performing gap analysis of the model to determine which of the primitive metrics are already collected by said organization and the process capabilities for data collection;

identifying new data collection sources for those primitive metrics which are not already collected by said organization;

implementing tools and processes for gathering said

primitive metrics; and

generating measurement reports from said primitive metrics.

2. The method of claim 1, said building step further comprising the step of:

selecting as said metrics those which satisfy prioritized behaviors.

3. The method of claim 2, said building step further comprising the step of:

selecting as said metrics those which also satisfy related measures.

4. A method for creating and using a measurement model work product, comprising the steps of:

providing a target future business capabilities work product for defining customer goals necessary to

achieve through measurements; and

translating said customer goals into a measurement model work product defining account specific behaviors and measures that empirically demonstrate said behaviors.

5. The method of claim 4, further comprising the step of:

defining a gap analysis work product specifying differences between said measurement model work product and current customer measurements to identify possible deficiencies in organization measurement processes.

6. A system for creating and using a measurement model work product, comprising:

a target future business capabilities work product for defining customer goals necessary to achieve through measurements; and

a measurement model work product for translating said customer goals into account specific behaviors and

measures that empirically demonstrate said behaviors.

7. The system of claim 6, further comprising:

a gap analysis work product for specifying differences between said measurement model work product and current customer measurements to identify possible deficiencies in organization measurement processes.

8. A method for defining the measures of performance of a customer information technology organization, comprising the steps of:

collecting into a competency-defined measurement categories and measurements file definitions of selected categories of behavioral measurements;

selecting from said file contract measurements;

implementing said contract measurements; and

using and maintaining said measurements.

9. The method of claim 8, said categories including human resources, quality, customer, cost and schedule, process, and productivity and output categories of behavioral measurements.

10. System for formulating measurement requirements that are to be implemented in an engagement, comprising:

a current customer measurements work product for detailing current measurements being collected and reported by a customer;

a measurement model work product for translating customer goals into account specific behaviors and measures that empirically demonstrate said behaviors; and

a measurement gap analysis work product for defining differences between said current measurements and said account specific behaviors and measures.

11. The system of claim 10, further comprising:

an interface agreement work product for documenting expectations for data collection;

a configuration script work product for configuring tools required to implement said requirements;

a contract measurement business policy work product for defining expectations of behavior required to support said requirements; and

a scorecard work product for visualizing said requirements.

12. A measurement and performance management method, comprising the steps of:

during a proposal contextual phase, developing a measurement solution to be delivered to a customer;

during a due diligence phase, validating assumptions and behavioral expectations in said measurement solution; and

during a transformation phase, transferring to said customer resources and assets for implementing said measurement solution as validated.

13. The method of claim 12, said developing step comprising the further step of:

building said measurement solution responsive to inputs from a measurement catalog work product and a target future business capabilities work product.

14. The method of claim 13, said validating step comprising the further step of:

executing a measurement gap analysis work product responsive to inputs from a current customer measurements work product, a future process design points work product, a to-be organization design work product and a to-be process design work product.

15. The method of claim 14, said transferring step comprising the further step of:

pursuant to an interface agreement work product, providing an external interface requirements work product, a configuration script work product, a contract measurement business policy work product, a scorecard work product, an end-user training materials work product, and a deployment plan work product.

16. System for formulating measurement requirements that are to be implemented in an engagement, comprising:

means operable during a proposal contextual phase for developing a measurement solution to be delivered to a customer;

means operable during a due diligence phase for validating assumptions and behavioral expectations in said measurement solution; and

means operable during a transformation phase for transferring to said customer resources and assets for implementing said measurement solution as validated.

17. Method for executing a gap analysis responsive to a measurement model and current customer measurements, comprising the steps of:

mapping said current measurement model to said current customer measurements and identifying measurement gaps;

identifying measurements not covered by said measurement model;

identifying nonproductive measurements;

identifying the impact to an organizational structure and processes of said customer of said measurement gaps; and

identifying any other requirements for measurement program success.

18. A canonical method for defining a measurements model work product, comprising the steps of:

articulating envisioned business goals and behaviors;

enumerating and defining behaviors and goals satisfied by said behaviors in a database of existing contract measurements;

selecting potential measurements for said business goals and behaviors from said database;

prioritizing and balancing said potential measurements to determine said measurement model work product.

19. System for defining a measurements model work product, comprising:

a first database for articulating envisioned business goals and behaviors;

a second database for enumerating and defining behaviors and goals satisfied by said behaviors selected from existing contract measurements;

means for selecting potential measurements for said business goals and behaviors from said second database;

prioritizing and balancing means for determining from said potential measurements those to be included in said measurement model work product.

20. A method for defining a measurements model work product, comprising the steps of:

defining the goals of a customer information technology organization;

defining behaviors associated with said goals;

mapping said behaviors against a measurement catalog to identify first measures related to said behaviors;

building a first draft measurement model from said first measures;

prioritizing said first measures with respect to number of behaviors satisfied;

prioritizing said first measures with respect to number of related measures;

responsive to said prioritizing steps, building a second draft measurement model.

21. The method of 20, further comprising the step of performing gap analysis on said measurement model.

22. A program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for defining the measures of performance of a customer information technology organization, said method steps comprising:

identifying customer performance goals;

building a model in response to the customer goals including a plurality of primitive metrics;

performing gap analysis of the model to determine which of the primitive metrics are already collected by said organization and the process capabilities for data

collection;

identifying new data collection sources for those primitive metrics which are not already collected by said organization;

implementing tools and processes for gathering said primitive metrics; and

generating measurement reports from said primitive metrics.

23. A program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for creating and using a measurement model work product, said method steps comprising:

providing a target future business capabilities work product for defining customer goals necessary to achieve through measurements; and

translating said customer goals into a measurement model work product defining account specific behaviors

and measures that empirically demonstrate said behaviors.

24. A program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for defining the measures of performance of a customer information technology organization, said method steps comprising:

collecting into a competency-defined measurement categories and measurements file definitions of selected categories of behavioral measurements;

selecting from said file contract measurements;

implementing said contract measurements; and

using and maintaining said measurements.

25. A program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for providing a measurement and performance management method, said method steps

comprising:

during a proposal contextual phase, developing a measurement solution to be delivered to a customer;

during a due diligence phase, validating assumptions and behavioral expectations in said measurement solution; and

during a transformation phase, transferring to said customer resources and assets for implementing said measurement solution as validated.

26. A program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for executing a gap analysis responsive to a measurement model and current customer measurements, said method steps comprising:

mapping said current measurement model to said current customer measurements and identifying measurement gaps;

identifying measurements not covered by said measurement model;

identifying nonproductive measurements;

identifying the impact to an organizational structure and processes of said customer of said measurement gaps; and

identifying any other requirements for measurement program success.

27. A program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for defining a measurements model work product, said method steps comprising:

articulating envisioned business goals and behaviors;

enumerating and defining behaviors and goals satisfied by said behaviors in a database of existing contract measurements;

selecting potential measurements for said business goals and behaviors from said database;

prioritizing and balancing said potential measurements

to determine said measurement model work product.

28. A program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for defining a measurements model work product, said method steps comprising:

defining the goals of a customer information technology organization;

defining behaviors associated with said goals;

mapping said behaviors against a measurement catalog to identify first measures related to said behaviors;

building a first draft measurement model from said first measures;

prioritizing said first measures with respect to number of behaviors satisfied;

prioritizing said first measures with respect to number of related measures;

responsive to said prioritizing steps, building a second draft measurement model.

Docket No. END9-2000-0041-US1

SYSTEM AND METHOD FOR MEASURING AND MANAGING PERFORMANCE IN AN INFORMATION TECHNOLOGY ORGNIZATION

Abstract of the Disclosure

An IT measurement system is aligned with the IT organization's business goals by examining the IT organization's current state-of-affairs with respect to measurement and analyzing how it maps to a proposed measurement model. To ensure the viability of the proposed measurement model, the IT organization and measurement processes it employs are structured to naturally support the collection, analysis, reporting, and use of the measurements in the proposed model. The measurement model and associated techniques work from a top-down approach, starting with the goals of the organization, identifying appropriate behaviors and finally associating measures that will empirically demonstrate achievement of the behaviors. In addition, algorithms for prioritization are executed to ensure that the best fitting measures are selected in the final measurement model.

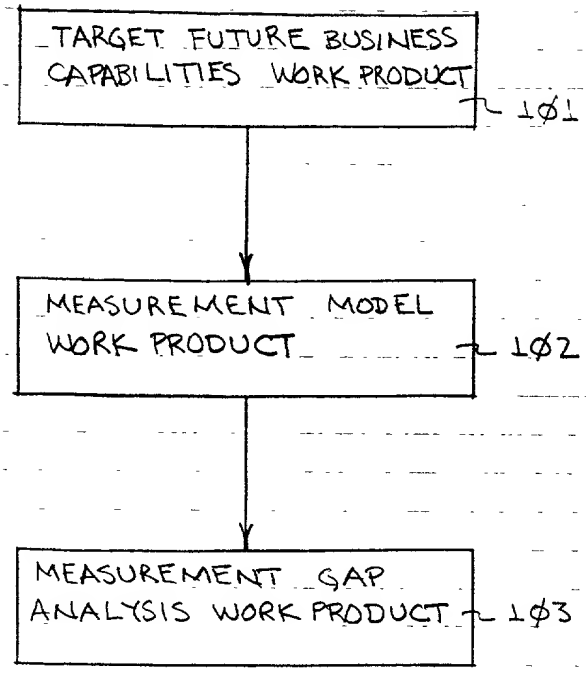
TARGET FUTURE BUSINESS CAPABILITIES WORK PRODUCT
101
MEASUREMENT MODEL WORK PRODUCT
102
MEASUREMENT GAP ANALYSIS WORK PRODUCT
103

FIGURE 1

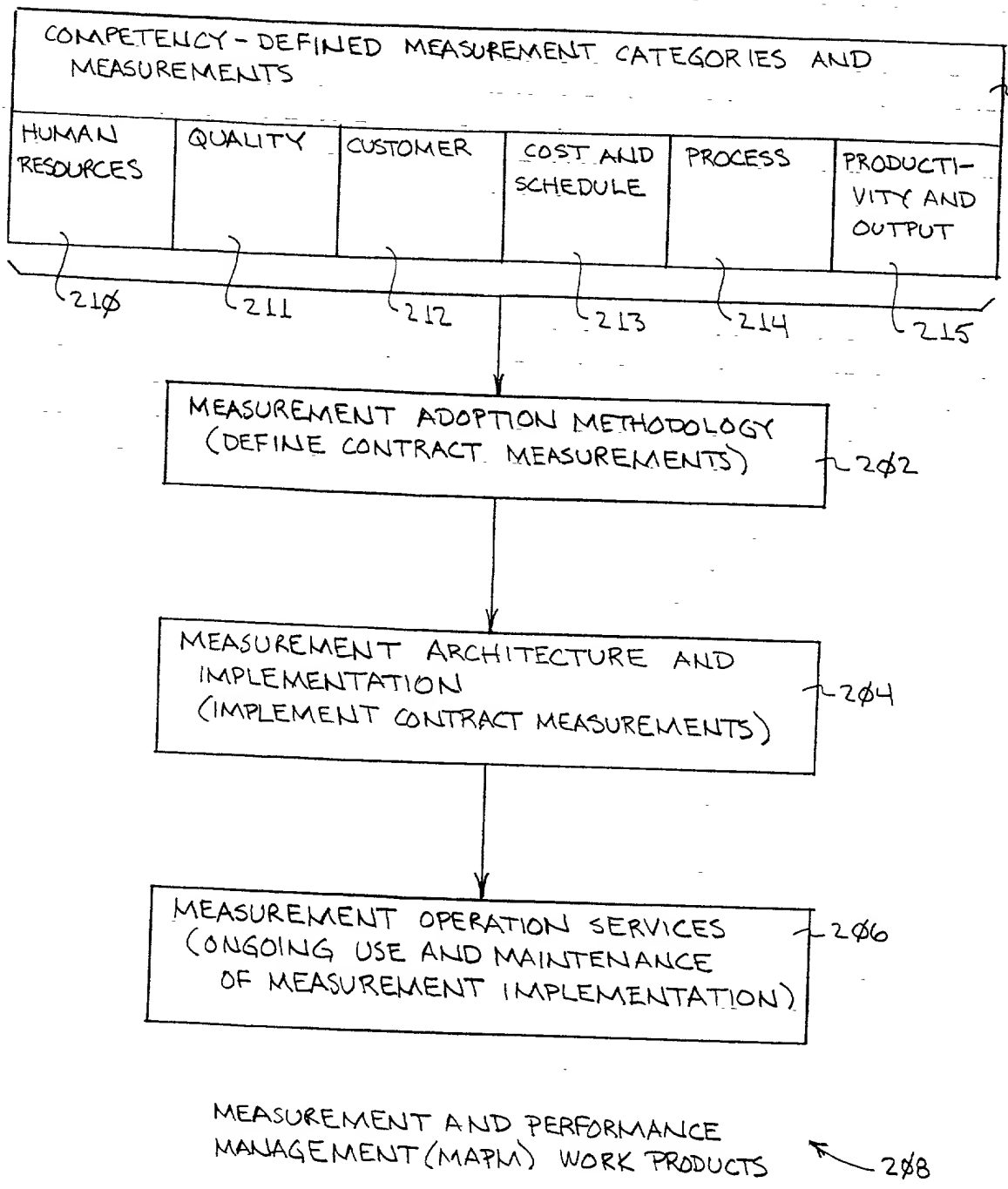
COMPETENCY-DEFINED MEASUREMENT CATEGORIES AND MEASUREMENTS
200
HUMAN RESOURCES
QUALITY
CUSTOMER
COST AND SCHEDULE
PROCESS
PRODUCTIVITY AND OUTPUT
210
211
212
213
214
215
MEASUREMENT ADOPTION METHODOLOGY (DEFINE CONTRACT MEASUREMENTS)
202
MEASUREMENT ARCHITECTURE AND IMPLEMENTATION (IMPLEMENT CONTRACT MEASUREMENTS)
204
MEASUREMENT OPERATION SERVICES (ONGOING USE AND MAINTENANCE OF MEASUREMENT IMPLEMENTATION)
206
MEASUREMENT AND PERFORMANCE MANAGEMENT (MAPM) WORK PRODUCTS
208

FIG. 2

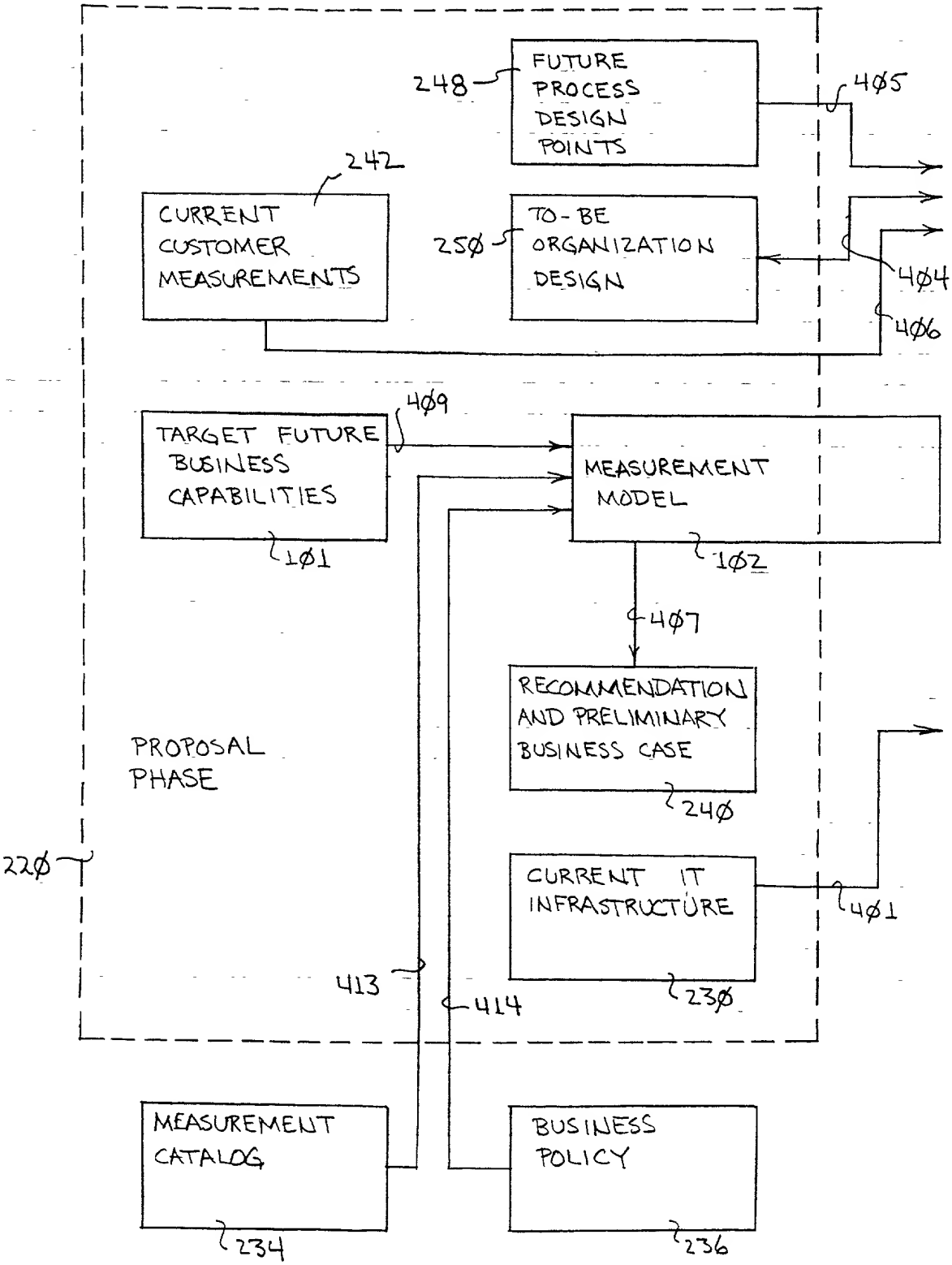
FUTURE PROCESS DESIGN POINTS
248
405
242
CURRENT CUSTOMER MEASUREMENTS
250
TO-BE ORGANIZATION DESIGN
404
406
409
TARGET FUTURE BUSINESS CAPABILITIES
101
MEASUREMENT MODEL
102
407
RECOMMENDATION AND PRELIMINARY BUSINESS CASE
240
PROPOSAL PHASE
220
CURRENT IT INFRASTRUCTURE
401
230
413
414
MEASUREMENT CATALOG
234
BUSINESS POLICY
236

FIG. 3A

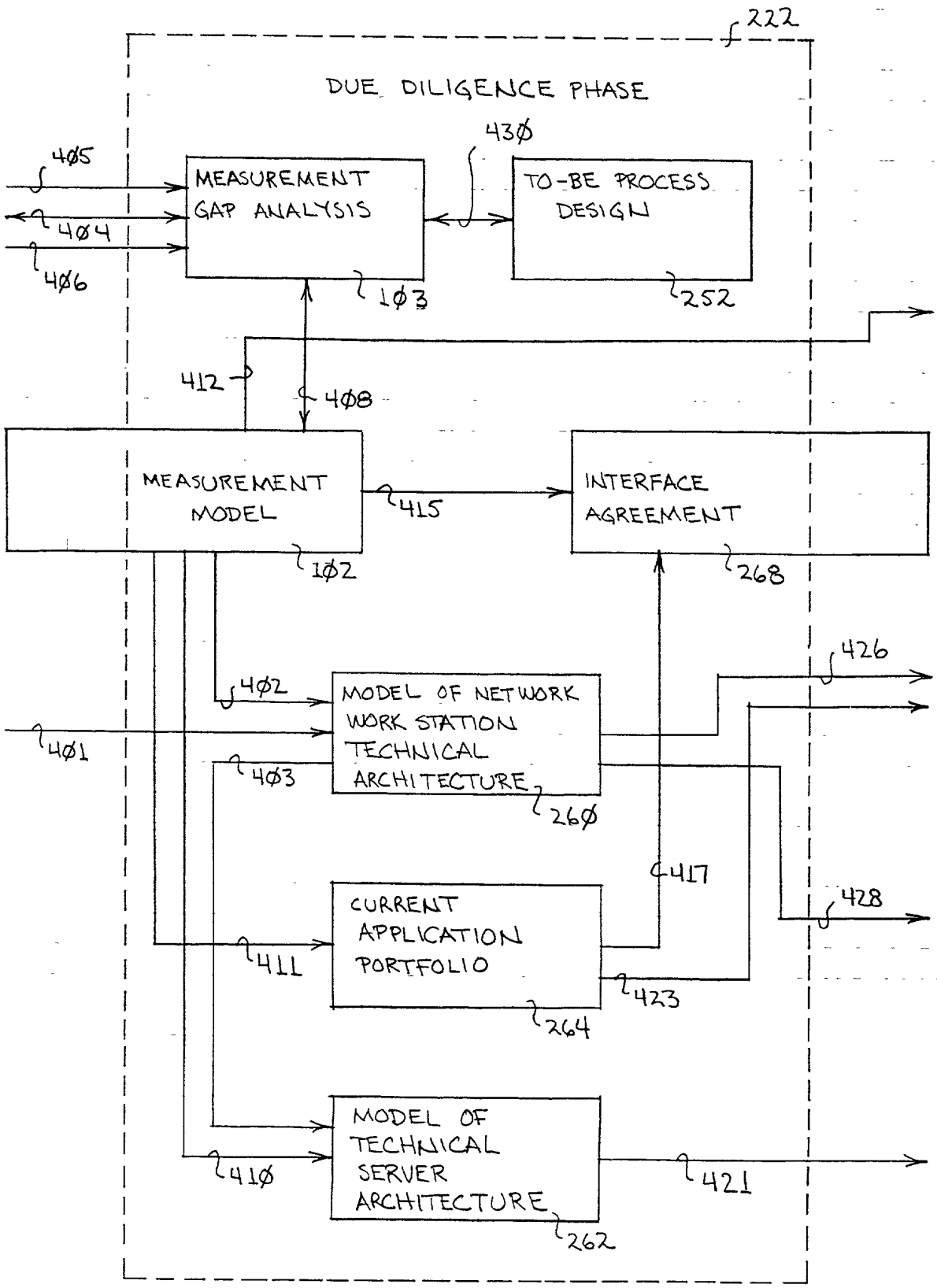
222
DUE DILIGENCE PHASE
405
404
406
MEASUREMENT GAP ANALYSIS
103
430
TO-BE PROCESS DESIGN
252
412
408
MEASUREMENT MODEL
102
415
INTERFACE AGREEMENT
268
426
402
401
MODEL OF NETWORK WORK STATION TECHNICAL ARCHITECTURE
403
260
417
428
CURRENT APPLICATION PORTFOLIO
411
423
264
MODEL OF TECHNICAL SERVER ARCHITECTURE
410
421
262

FIG. 3B

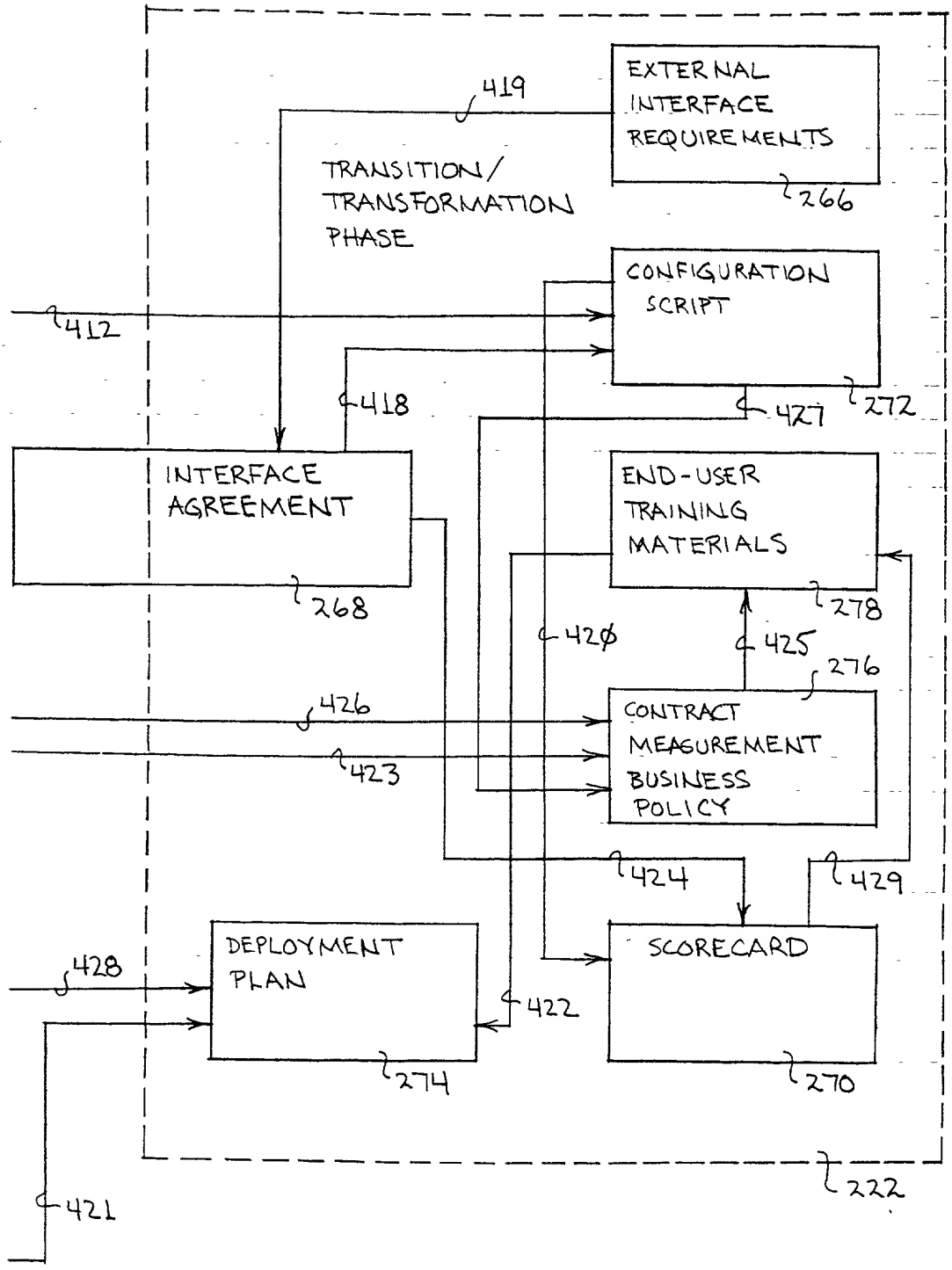
EXTERNAL INTERFACE REQUIREMENTS
266
419
TRANSITION/ TRANSFORMATION PHASE
CONFIGURATION SCRIPT
272
412
418
427
INTERFACE AGREEMENT
268
END-USER TRAINING MATERIALS
278
420
425
276
426
CONTRACT MEASUREMENT BUSINESS POLICY
423
424
429
DEPLOYMENT PLAN
274
428
422
SCORECARD
270
421
222

FIG. 3C

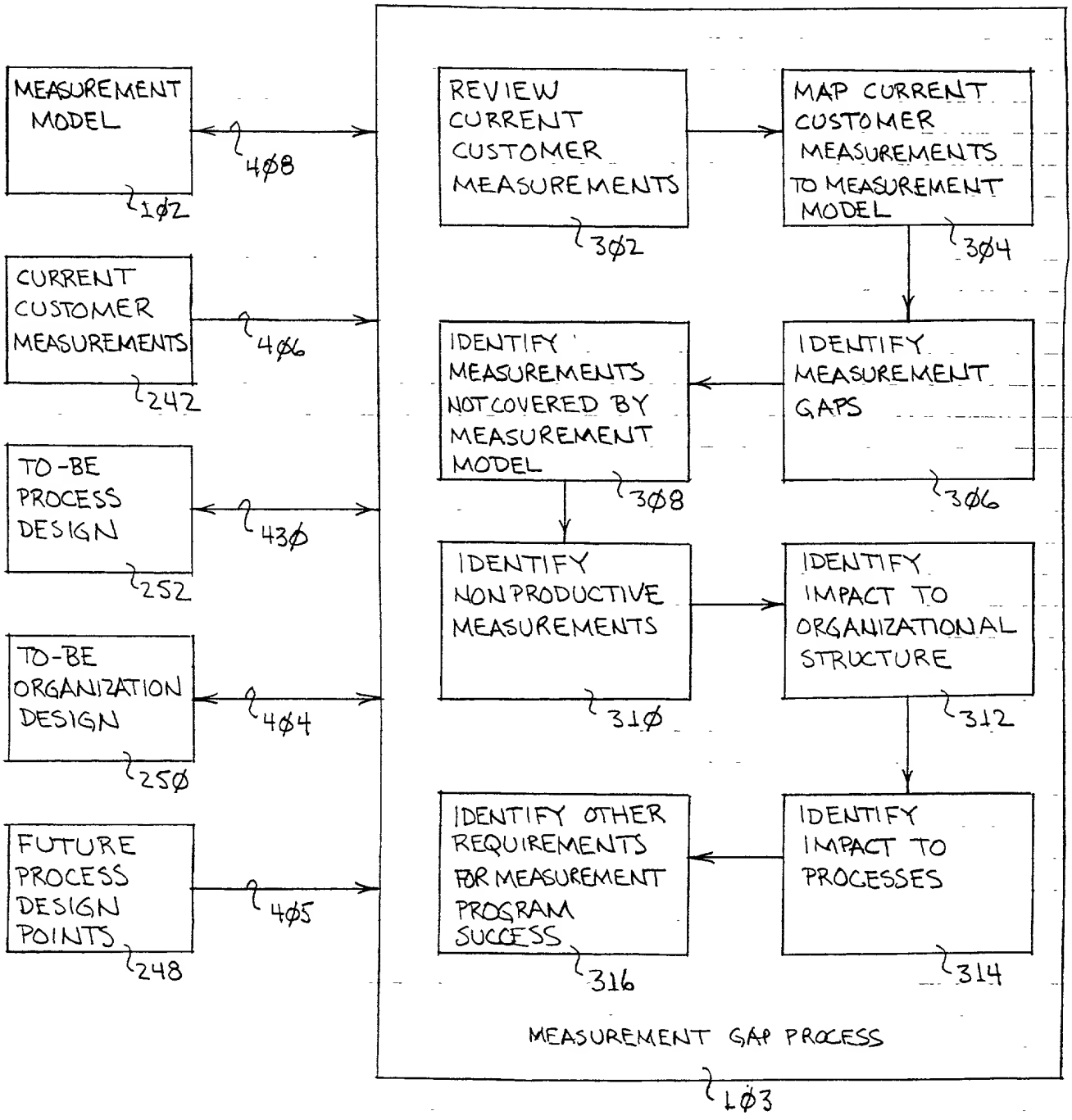
MEASUREMENT MODEL
102
408
CURRENT CUSTOMER MEASUREMENTS
242
406
TO-BE PROCESS DESIGN
252
430
TO-BE ORGANIZATION DESIGN
250
404
FUTURE PROCESS DESIGN POINTS
248
405
REVIEW CURRENT CUSTOMER MEASUREMENTS
302
MAP CURRENT CUSTOMER MEASUREMENTS TO MEASUREMENT MODEL
304
IDENTIFY MEASUREMENT GAPS
306
IDENTIFY MEASUREMENTS NOT COVERED BY MEASUREMENT MODEL
308
IDENTIFY NONPRODUCTIVE MEASUREMENTS
310
IDENTIFY IMPACT TO ORGANIZATIONAL STRUCTURE
312
IDENTIFY IMPACT TO PROCESSES
314
IDENTIFY OTHER REQUIREMENTS FOR MEASUREMENT PROGRAM SUCCESS
316
MEASUREMENT GAP PROCESS
103

FIG. 4

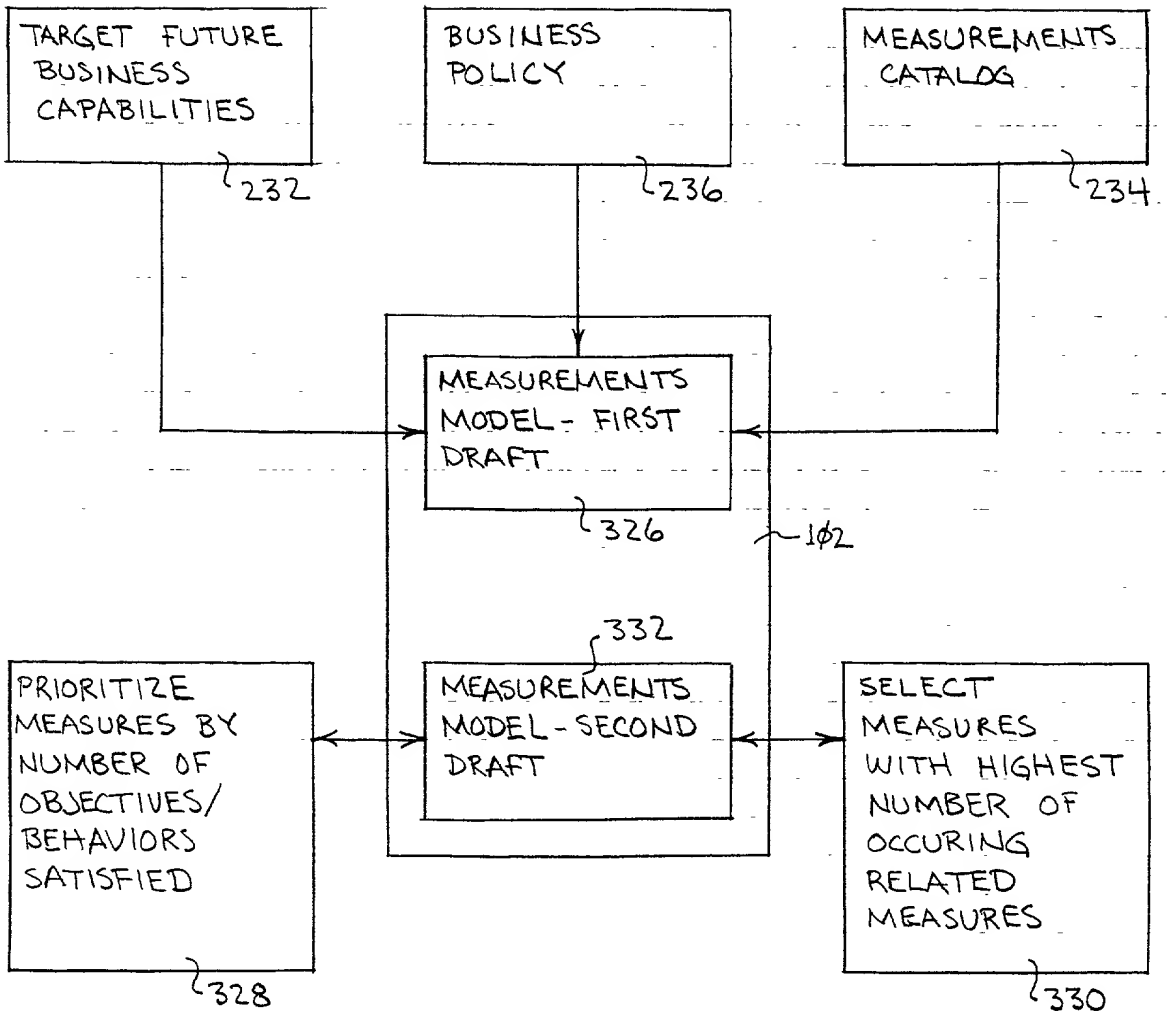
TARGET FUTURE BUSINESS CAPABILITIES
232
BUSINESS POLICY
236
MEASUREMENTS CATALOG
234
MEASUREMENTS MODEL - FIRST DRAFT
326
102
332
MEASUREMENTS MODEL - SECOND DRAFT
PRIORITIZE MEASURES BY NUMBER OF OBJECTIVES/ BEHAVIORS SATISFIED
328
SELECT MEASURES WITH HIGHEST NUMBER OF OCCURING RELATED MEASURES
330

FIG. 5

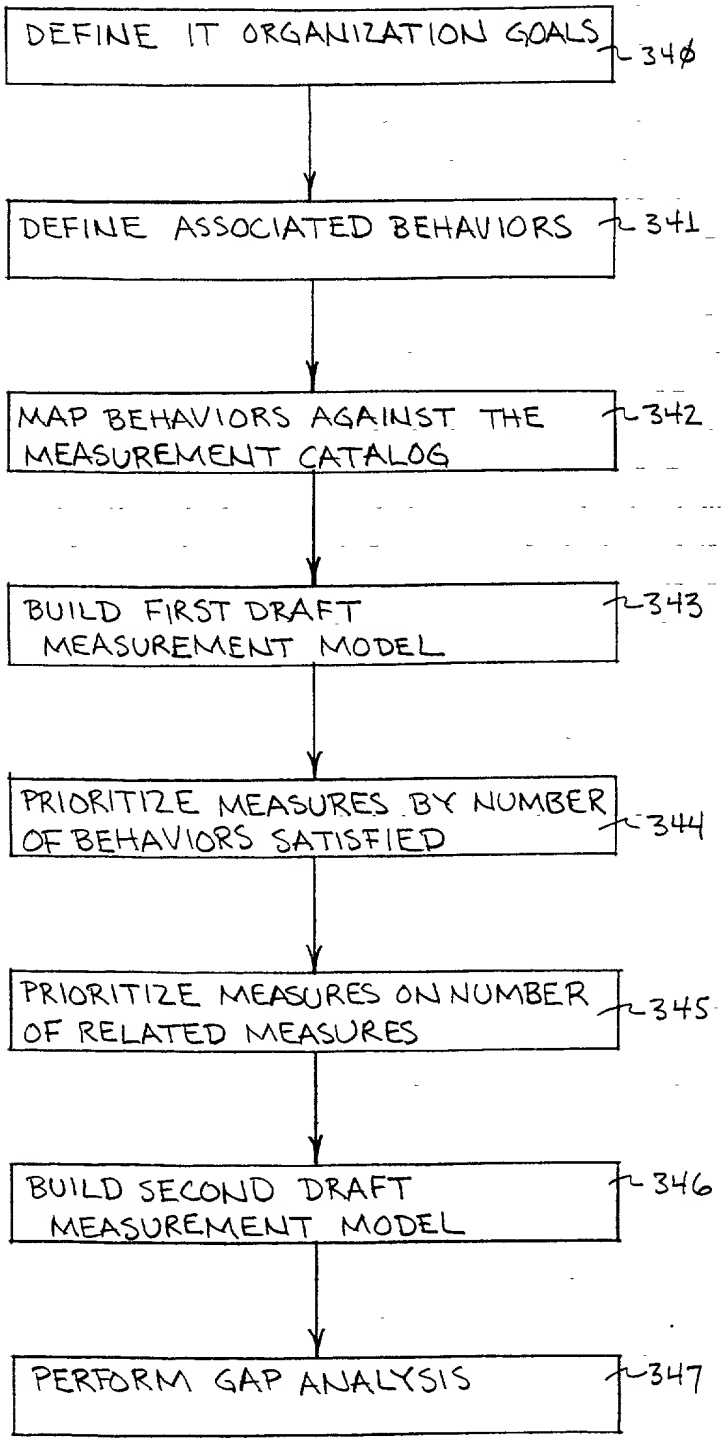
DEFINE IT ORGANIZATION GOALS
340
DEFINE ASSOCIATED BEHAVIORS
341
MAP BEHAVIORS AGAINST THE MEASUREMENT CATALOG
342
BUILD FIRST DRAFT MEASUREMENT MODEL
343
PRIORITIZE MEASURES BY NUMBER OF BEHAVIORS SATISFIED
344
PRIORITIZE MEASURES ON NUMBER OF RELATED MEASURES
345
BUILD SECOND DRAFT MEASUREMENT MODEL
346
PERFORM GAP ANALYSIS
347

FIG. 6

Att. Docket No. **END9 2000 0041 US1**

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name; I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **SYSTEM AND METHOD FOR MEASURING AND MANAGING PERFORMANCE IN AN INFORMATION TECHNOLOGY ORGANIZATION**

the specification of which (check one)

__X__ is attached hereto.

_____ was filed on _____ as Application Serial No. or PCAT International Application No. _____ and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below any foreign application for patent or inventors certificate, or PCAT International application having a filing date before that of the application on which priority is claimed::

Prior Foreign Appplication(s):

Number	Country	Date/Month/Year	Priority Claimed

I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below.

Application Number	Filing Date

I hereby claim the benefit under Title 35, United States Code, section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose information material to patentability of this application as defined in 37 CFR Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

Prior U.S. Applications:

Serial No.	Filing Date	Status (patented, pending, abandoned)

As a named inventor, I hereby appoint the following attorneys and/or agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: David L. Adour, Reg. No. 29,604; Lawrence R. Fraley, Reg. No. 26,885; John R. Pivnichny, Reg. No. 43,001; Arthur J. Samodovitz, Reg. No. 31,297; William H. Steinberg, Reg. No. 28,540; Christopher A. Hughes, Reg. No. 26,914; Edward A. Pennington, Reg. No. 32,588; John H. Hoel, Reg. No. 26,279; Joseph C. Redmond, Jr., Reg. No. 18,753; and Shelley M Beckstrand, Reg. No. 24,886.

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314 Main Street
Owego, NY 13827

Direct telephone calls to: (607) 687-9913 [alt: (607) 755-3268]

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Signature: _____ Date: _____

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Signature: _____ Date: _____

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